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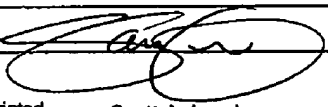
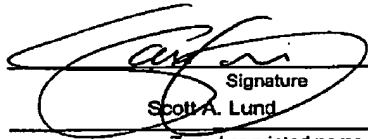
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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 100201207-1	
I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax. No. (571) 273-8300 on <u>March 3, 2006</u> Signature  Typed or printed name <u>Scott A. Lund</u>		Application Number 10/066,529	Filed January 31, 2002
		First Named Inventor Ronald A. Askeland et al.	
		Art Unit 2853	Examiner L. Nguyen
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal. The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/98) <input checked="" type="checkbox"/> attorney or agent of record. 41,166 Registration number <input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34		 Signature <u>Scott A. Lund</u> Typed or printed name (612) 573-2006 Telephone number March 3, 2006 Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			
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This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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MAR 03 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ronald A. Askeland et al.	Examiner:	L. Nguyen
Serial No.:	10/066,529	Group Art Unit:	2853
Filed:	January 31, 2002	Docket No.:	100201207-1
Title:	ESTIMATING LOCAL EJECTION CHAMBER TEMPERATURE TO IMPROVE PRINthead PERFORMANCE		

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
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Alexandria, VA 22313-1450

Dear Sir/Madam:

Please consider the following remarks during the Pre-Appeal Brief Conference. As these remarks outline a clear legal or factual deficiency in the rejections, Applicant submits that the Pre-Appeal Brief Request for Review is appropriate.

Pre-Appeal Brief Request for Review

Applicant: Ronald A. Askeland et al.

Serial No.: 10/066,529

Filed: January 31, 2002

Docket No.: 100201207-1

Title: ESTIMATING LOCAL EJECTION CHAMBER TEMPERATURE TO IMPROVE PRINthead PERFORMANCE

REMARKS**Claim Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103**

Claims 3, 24, 27, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. U.S. Patent No. 4,791,435. Claims 4-9, 10-11, 21-22, 25, 28, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. in view of Prakash et al. U.S. Patent No. 6,302,507. Applicant respectfully traverses these rejections.

Independent claim 24 includes "a controller configured to estimate an actual temperature of the printhead assembly based on the measured temperature of the printhead assembly, the thermal response model of the printhead assembly, and the ejection history of the ejection elements," wherein "the thermal response model of the printhead assembly includes a first set of parameters when the ejection elements have been fired and a second set of parameters when the ejection elements have not been fired."

Independent claim 27 includes "estimating an actual printhead operating temperature based on a thermal response model of the printhead, an ejection history of the ejection elements, and the current printhead operating temperature," wherein "the thermal response model of the printhead includes a first set of parameters when the ejection elements have been fired and a second set of parameters when the ejection elements have not been fired."

Independent claim 30 includes "determining an estimated actual operating temperature of the printhead based on a thermal response model of the printhead, the current operating temperature of the printhead, and the current operating parameters of the printhead, including an ejection history of the ejection elements," wherein "the thermal response model of the printhead includes a first set of parameters when the ejection elements have been fired and a second set of parameters when the ejection elements have not been fired."

Independent claim 31 includes "a controller configured to estimate an actual temperature of the printhead assembly based on the measured temperature of the printhead assembly, the thermal response model of the printhead assembly, and the

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ejection history of the ejection elements," wherein "the thermal response model includes a first set of parameters when the printhead assembly has been printing and a second set of parameters when the printhead assembly has not been printing."

Independent claims 24, 27, 30, and 31, therefore, each include estimating an actual temperature of the printhead assembly based on (1) a measured or current operating temperature of the printhead assembly, (2) a thermal response model of the printhead assembly, and (3) an ejection history of the ejection elements, wherein the thermal response model includes (a) a first set of parameters when the ejection elements have been fired (i.e., the printhead assembly has been printing) and (b) a second set of parameters when the ejection elements have not been fired (i.e., the printhead assembly has not been printing).

With respect to the Smith et al. and Prakash et al. patents, Applicant submits that neither of these patents, individually or in combination, teach or suggest a printhead temperature control system as claimed in independent claim 24, a method of controlling a temperature of a printhead as claimed in independent claim 27, a method of controlling a temperature of a printhead as claimed in independent claim 30, nor a printhead temperature control system as claimed in independent claim 31.

For example, the Smith et al. patent is directed to arrangements for controlling the uniformity of ink drops in inkjet printers by providing a control of the temperature of the printhead or pen (col. 1, lines 6-11), wherein thermal models of the pens or printheads are provided and used in conjunction with printhead temperature sensors to provide information useful in controlling printhead temperature, and wherein profiles of the use of each nozzle when compared with a thermal model provide information useful in controlling printhead temperature (col. 1, line 64 - col. 2, line 2). More specifically, the Smith et al. patent provides temperature compensation and control for both low printhead temperature and high printhead temperature (col. 2, lines 3-5).

To control the printhead temperature, the Smith et al. patent discloses estimating the printhead temperature based on temperature sensors (col. 4, lines 38-42). As such, the Smith et al. patent discloses that the indication of printhead temperature (viz., from temperature sensor TS) is employed in a decision making process to determine the temperature condition of the nozzles (i.e., whether the nozzles are cold or whether the nozzles are overheating) and

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is used with processor based information as to the location of the nozzles on the substrate, the color of the ink in a particular printhead, and the use profile of that printhead to maintain uniformity in the ink drops which are fired (col. 4, lines 53-63).

The use profile of the Smith et al. patent, therefore, is used to control printhead temperature, not estimate the printhead temperature. In one example, the Smith et al. patent discloses that in a single printhead arrangement, excessive temperature alone or rising temperature with "a high use profile" may be processed by the data processing section of the microprocessor to "produce a control to reduce data throughput to prevent the rise in temperature" (col. 5, lines 21-26). In another example, the Smith et al. patent discloses that if the printhead exists in a low temperature situation unacceptable for printing and "the use profile is such that no viscous ink plugs exist in the nozzle," warm up pulses for the printhead may be selected (col. 5, line 67 - col. 6, line 3).

The Smith et al. patent, however, does not disclose estimating an actual temperature of the printhead assembly based on (1) a measured or current operating temperature of the printhead assembly, (2) a thermal response model of the printhead assembly, and (3) an ejection history of the ejection elements, wherein the thermal response model includes (a) a first set of parameters when the ejection elements have been fired (i.e., the printhead assembly has been printing) and (b) a second set of parameters when the ejection elements have not been fired (i.e., the printhead assembly has not been printing). Rather, as outlined above, the Smith et al. patent merely provides temperature compensation and control for different printhead temperatures, and only discloses temperature sensors for use in estimating the printhead temperature.

In view of the above, Applicant submits that independent claims 24, 27, 30, and 31 are each patentably distinct from the Smith et al. and Prakash et al. patents and, therefore, are each in a condition for allowance, and that all claims depending therefrom are also in a condition for allowance. Applicant, therefore, respectfully requests that the rejections of claims 3, 24, 27, and 31 under 35 U.S.C. 102(b) and claims 4-9, 10-11, 21-22, 25, 28, 30, and 32 under 35 U.S.C. 103(a) be reconsidered and withdrawn and that claims 3-11, 21, 22, 24, 25, 27, 28, and 30-32 be allowed.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 3-11, 21, 22, 24, 25, 27, 28, and 30-32 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Request should be directed to either James R. McDaniel at Telephone No. (858) 655-4157, Facsimile No. (858) 655-5859 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Hewlett-Packard Company
Intellectual Property Administration
P.O. Box 272400
Fort Collins, Colorado 80527-2400

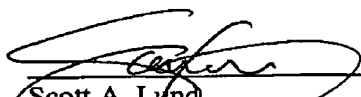
Respectfully submitted,

Ronald A. Askeland et al.,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300 on this 3rd day of March, 2006.

By 

Name: Scott A. Lund